WHAT IS CLAIMED IS:

1.   An image processing apparatus for receiving and processing a plurality of image signals, comprising:

band segmentation means for segmenting an image

5   signal into different frequency band components; and

image composition means for, after said band segmentation means segments a plurality of image signals, compositing the plurality of image signals by replacing some or all image data in common frequency

10   band components among the plurality of image signals, and outputting one image signal.

2.   An image processing apparatus for receiving and processing a plurality of image signals, comprising:

image composition means for receiving a plurality

15   of image signals, which have been segmented into frequency band components, and compositing the plurality of image signals by replacing some or all image data in a predetermined frequency band component among the plurality of image signals; and

20   image output means for outputting the images composited by said image composition means as a moving image upon changing the predetermined frequency band component processed by said image composition means along with an elapse of time.

25   3.   An image processing method for receiving and processing a plurality of image signals, comprising:

a band segmentation step of segmenting an image

signal into different frequency band components; and

an image composition step of compositing, after a

plurality of image signals are segmented in the band

5   segmentation step, the plurality of image signals by

replacing some or all image data in common frequency

band components among the plurality of image signals,

and outputting one image signal.

4.   An image processing method for receiving and

10   processing a plurality of image signals, comprising:

an image composition step of receiving a

plurality of image signals, which have been segmented

into frequency band components, and compositing the

plurality of image signals by replacing some or all

15   image data in a predetermined frequency band component

among the plurality of image signals; and

an image output step of outputting the images

composited in the image composition step as a moving

image upon changing the predetermined frequency band

20   component processed in the image composition step along

with an elapse of time.

5.   A computer-readable medium storing a program code

for causing a computer to execute:

a band segmentation step of segmenting an image

25   signal into different frequency band components; and

an image composition step of compositing, after a

plurality of image signals are segmented in the band

segmentation step, the plurality of image signals by replacing some or all image data in common frequency band components among the plurality of image signals, and outputting one image signal.

5   6.   A computer-readable medium storing a program code for causing a computer to execute:

an image composition step of receiving a plurality of image signals, which have been segmented into frequency band components, and compositing the

10   plurality of image signals by replacing some or all image data in a predetermined frequency band component among the plurality of image signals; and

an image output step of outputting the images composited in the image composition step as a moving

15   image upon changing the predetermined frequency band component processed in the image composition step along with an elapse of time.

7.   An image processing apparatus for compositing image data, which are recorded while being segmented

20   into a plurality of frequency band components, for respective bands, and outputting composite image data, comprising:

data acquisition means for acquiring the image data;

25   playback output means for compositing the acquired image data for respective bands, and outputting composite image data; and

control means for controlling said data acquisition means and said playback output means in accordance with a playback condition,

wherein when one image is to be composited and
5   played back on the basis of image data which form m (m is an integer not less than 2) successive images,

said control means controls said data acquisition means to acquire data of some frequency band components of the plurality of frequency band components from each
10   of image data which form (m - 1) images, and to acquire data of at least some frequency band components of the plurality of frequency band components from image data which form the remaining one image, and

said control means controls said playback output
15   means to composite the one image for respective bands based on the acquired data, and to output the composite image.

8.   The apparatus according to claim 7, wherein when one image is to be composited and played back on the
20   basis of image data which form m (m is an integer not less than 2) successive images,

said control means controls said data acquisition means to acquire data of an identical frequency band component from each of image data which form (m - 1)
25   images, and to acquire data of all frequency band components of the plurality of frequency band

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components from image data which form the remaining one image.

9.   The apparatus according to claim 8, wherein the identical frequency band component is a lowest

5   frequency band component.

10.   The apparatus according to claim 8, wherein the identical frequency band component is a plurality of frequency band components including a lowest frequency band component.

10   11.   The apparatus according to claim 8, wherein said playback output means composites the one image for respective bands after said playback output means composites the respective data of the identical frequency band components and data of a frequency band

15   component equal to the identical frequency band component contained in the image data of the remaining one image by making a predetermined calculation, and outputs the image.

12.   The apparatus according to claim 11, wherein the

20   predetermined calculation is a weighted mean calculation.

13.   The apparatus according to claim 7, wherein the data of the frequency band components acquired from each of the image data which form the (m - 1) images,

25   and the data of the frequency band components acquired from the image data that form the remaining one image are data of all different frequency band components,

and a combination of the acquired data of the frequency band components corresponds to data of all of the plurality of frequency band components.

14. The apparatus according to claim 7, wherein the image data are segmented into the plurality of frequency band components by two-dimensional discrete wavelet transformation processes of a plurality of levels.

15. The apparatus according to claim 7, further comprising:

  means for sensing an image; and

  transformation means for segmenting the sensed image into a plurality of frequency components, and recording the plurality of frequency components.

16. The apparatus according to claim 7, wherein when the playback condition indicates playback at a speed higher than a normal playback speed, said control means controls said data acquisition means and said playback output means to composite one image from image data which form the m (m is an integer not less than 2) successive images for respective bands, and to play back the image.

17. The apparatus according to claim 16, wherein the playback condition is input by operation means that can be operated by a user.

18. An image processing method for compositing image data, which are recorded while being segmented into a

plurality of frequency band components, for respective

bands, and outputting composite image data, comprising:

a data acquisition step of acquiring the image

data;

5   a playback output step of compositing the

acquired image data for respective bands, and

outputting composite image data; and

a control step of controlling the data

acquisition step and the playback output step in

10   accordance with a playback condition,

wherein when one image is to be composited and

played back on the basis of image data which form m (m

is an integer not less than 2) successive images,

the control step includes:

15   a step of controlling the data acquisition step

to acquire data of some frequency band components of

the plurality of frequency band components from each of

image data which form (m - 1) images, and to acquire

data of at least some frequency band components of the

20   plurality of frequency band components from image data

which form the remaining one image, and

a step of controlling the playback output step to

composite the one image for respective bands based on

the acquired data, and to output the composite image.

25   19.   A computer-readable medium storing a program code

for causing a computer to execute:

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a data acquisition step of acquiring image data which is recorded while being segmented into a plurality of frequency band components;

a playback output step of compositing the

5 acquired image data for respective bands, and outputting composite image data; and

a control step of controlling the data acquisition step and the playback output step in accordance with a playback condition,

10 wherein when one image is to be composited and played back on the basis of image data which form m (m is an integer not less than 2) successive images,

the control step includes:

a step of controlling the data acquisition step

15 to acquire data of some frequency band components of the plurality of frequency band components from each of image data which form (m - 1) images, and to acquire data of at least some frequency band components of the plurality of frequency band components from image data

20 which form the remaining one image, and

a step of controlling the playback output step to composite the one image for respective bands based on the acquired data, and to output the composite image.